5-2017

Compiled Research & Materials, Appendix P: Current Solar Pricing

Andrew Tarutani
University of Dayton

Laura Kunas
University of Dayton

Madalyn Beban
University of Dayton

Colin Joern
University of Dayton

Conor McGrail
University of Dayton

The current pricing for solar fall in these general ranges.

Small arrays (4k – 7K) residential roof mount - $3.00 per watt. The price can be less, $2.75 if you use low quality products.

Small (4k – 7K) residential ground mount $2.75 per watt

Medium (8k – 10K) residential roofs - $2.75 per watt

Commercial arrays range from $2.50 down to $2.25. These could be businesses or farms.

Large commercial or small utility scale get down to under $2.00 per watt.

The breakdown of the prices for a Residential solar project generally comprises of the following:

1. Modules - 25% of project. If you want USA built or premium modules the total price will go higher …. Example range $.40 to $.75 / watt
2. Inverters - 10%
3. Racking - 10%
4. Balance of System (BOS) 15% This includes electrical, conduit, transformers, trenching, safety fencing
5. Engineering - Electrical, Civil, Structural 5%
6. Project Services 2% geotech, site survey, work to comply with zoning / code / interconnect, & legal
7. Installation 10%
8. Post installation support & services 3%
9. Sales and marketing, overhead, and profit 20%

The items which I think we could reduce could be

Balance of System (BOS) 15%	knock off 2% or 3%
Engineering - Electrical, Civil, Structural 5%	knock off 2% or 3%
Project Services 2% zoning / code / interconnect, & legal	Knock off 1%
Sales and marketing, overhead, and profit 20%	Knock off 5% Total 10%

Listen Up: Future Rooftop Solar Costs — Getting to $2.50/watt

March 22, 2017

By The Energy Show on Renewable Energy World

The solar industry is one of our most obvious success stories. Our industry directly employs 261,000 people. We generate energy that is both clean and renewable. And we generate this energy at prices that are less than conventional utility power — as low as 6 cents per kwh. But the industry is not resting on its laurels: installation costs for residential solar will continue to decline (BTW, what's a laurel?). $1.50 per installed watt was the original target of the SunShot program for residential solar costs.

I think it's going to take many more years to get to these low installation costs — even getting to $2.00 watt on the average seems almost insurmountable to me. Not because of the hardware costs; these are continuing to decline. But because of the soft costs like labor, sales and marketing, financing and overhead. Nevertheless, $2.50/watt is a target that is within our sites over the next few years.

Please join me on this Week's Energy Show on Renewable Energy World as I dissect the current solar costs for residential solar installations. We'll particularly focus on the three most likely ways that these average installation costs will be reduced: higher panel efficiency, less expensive equipment and better component integration. But don't hold your breath…overhead is more likely to go up than down.

Another reading - somewhat dated but the % are still in the ballpark.
http://www.nrel.gov/docs/fy14osti/60401.pdf